

REMARKS

Claims 1 - 47 are pending in the application. Claims 1 - 16, 18-30, and 44-47 stand rejected by the Examiner. Claims 1, 11, 44 and 46 have been amended. No new matter has been added by the amendments. Reconsideration of the application, as amended, is respectfully requested. The Examiner's rejections are addressed in substantially the same order as in the referenced office action.

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35 USC § 102 REJECTIONS

The present invention relates to a geophone apparatus having terminals on separate ends of the geophone to ease in-field assembly. The present invention includes structure and methods of assembly that include conductive parts being insulated from other conductive parts by providing an insulating surface treatment to at least a portion of a surface of one or more of the conductive parts. This treatment eliminates the need for additional insulation materials such as electrical isolation using ceramic, paper, plastics, and other materials found in conventional geophones.

Claims 18, 19, 44, 45 and 47 stand rejected 35 USC § 102(b) as being anticipated by McNeel et al. (U.S. Patent 5,475,652). Claim 44 is amended with this response and Applicant respectfully traverses.

Independent method claim 18 includes the limitation of treating a component surface to render at least a portion of the surface non-conductive. Rejected claim 19 depends from claim 18. Independent apparatus claim 44 as amended includes the limitation of "an electrically insulating layer disposed on a surface of one of the

electrically conductive pathway and the second plurality of parts. Claim 45 depends from claim 44. Finally, independent claim 47 includes the limitation of electrically conductive elements that include insulative surfaces.

5 The '652 reference describes a geophone with component insulation in the general sense as noted by the Examiner. Insulating conductive components is known in the art, as discussed in Applicants disclosure at page 6 lines 6-11. The rejected claims clearly limit the invention to a treated surface that is rendered non-conductive. This limitation is not taught in the cited reference.

10 A cited reference must teach each and every element of a claimed invention to show that the reference anticipates the claim. The '652 reference does not teach a geophone or a method having the above limitation. Therefore, Applicant respectfully submits that independent claims 18, 44 and 47, and dependent claims 19 and 45 are not anticipated by the '652 reference. Moreover, the limitation is not obvious in view of any cited reference or combination of references, because there is no teaching or suggestion to render a geophone component surface non-conductive by treating the surface.

15 Claims 1-10, 20-30 and 46 stand rejected 35 USC § 102(b) as being anticipated by Hall, Jr. (U.S. Patent 4,159,464) or McNeel et al. (U.S. Patent 4,144,520). Claims 1, 20, and 46 are amended with this response.

20 The Examiner concludes that a broad interpretation of "two sides" includes two sides of the same end of a geophone. Applicant has amended independent claims 1, 20 and 46 to clarify that the first terminal is one end and the second terminal is on a second end. Applicant respectfully submits that the amended claims

are now allowable, and the dependent claims 2-10 and 21-30 are likewise allowable over the cited references.

35 USC § 112 REJECTIONS

5 Claims 11-16 stand rejected under 35 USC § 112 as being indefinite. The Examiner concludes that there is no antecedent in claim 11 for the recitation of "the first end" in line two of the claim. Claim 11 is amended with this response.

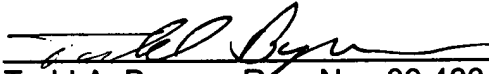
 Applicant has added the word "end" in the first element to clarify the element. The first element now reads " a housing including a first end and a second end
10 opposite the first end". Thus, there is antecedent basis for a first end. Therefore, Applicant respectfully submits that independent claim 11 and dependent claims 12-16 comply with 35 USC § 112 and are allowable.

CONCLUSION

For all of the foregoing reasons, applicant submits that the claims, as amended are allowable over the prior art of record. No fee is believed due for this response. The Commissioner is hereby authorized to charge any fee due for this response to **Deposit Account No. 13-0010 (IO-1027-US)**.

Respectfully submitted,

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